Board approval was obtained, patients were retrospectively and then prospectively identified and followed up for a 2-year period.

Results: Sixty-three AAAVgs were reviewed. Patient were an average age of 55 years (range, 23-85 years), and 93% had documented prior access. Thirty-eight patients required graft interventions in the follow-up period. Twenty-one balloon angioplasties were performed for outflow venous stenosis. Fourteen grafts thrombosed at an average of 461 days after implant. Seven patients had bacteremia resulting in four graft removals (6%) as the infective source. Two wound complications (one hematoma, one superficial wound dehiscence) occurred, but the graft was preserved. Notably, no patient required treatment for steal. The average primary patency rate was 85% at 30 days, 51% at 6 months, and 33% at 1 year. Primary assisted patency was 90% at 6 months, 79% at 1 year, and 37% at 2 years. Secondary patency was 92% at 6 months and 58% at 1 year. Twenty-one patients required a new access at an average of 477 days after the initial placement. Since receiving their grafts, 25 of the 63 patients have died, and one patient received a transplant.

Conclusions: AAAVgs are appropriate for patients who have few upper extremity access options. The patency rates for this "bailout" procedure are at least equivalent to other upper extremity AV grafts. The lack of symptomatic steal is an important benefit. The infection rate is lower than in femoral grafts, and correspondingly, AAAVgs can even be considered for primary use in patients that have disadvantaged upper extremity vasculature or who are at increased risk of steal syndrome.

Patient Compliance Limits the Efforts of Quality Improvement Initiatives on Arteriovenous Fistula Maturation

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Objectives: Our institutional quality improvement (QI) initiative monitors the schedule for arteriovenous fistula (AVF) maturation with follow-up ≤30 days after creation, fistulogram ≤40 days if indicated, and a second office visit ≤8 weeks. Additionally, a patient liaison contacts patients and dialysis units in cases of delayed follow-up. The purpose of this study is to determine the impact of the QI initiative on patient compliance and overall time to AVF maturation.

Methods: We performed a retrospective review of patients undergoing initial radiocephalic (RC), brachiocephalic (BC), and basilic vein transposition (BVT) creation before the QI initiative (pre-QI group: January to April 2012) and during the QI period (QI group: January to April 2013). Categoric data were compared using χ^2 analysis, and nominal data were compared using the Student *t*-test.

Results: We reviewed 198 first-time AVF creations in patients (57% male) with a mean age of 61 years. Demographics and comorbidities between the pre-QI and QI groups were similar. During the pre-QI period, 110 initial AVFs were created: 28% RC, 44% BC, and 28% BVT, whereas during the QI period, 88 initial AVFs were created: 27% RC, 51% BC, and 22% BVT ($\chi^2 = 0.487$). Compliance with the 30-day postoperative appointment increased significantly after the QI initiative, from 48% in the pre-QI group to 65% in the QI group ($P = .015$). Yet, the QI initiative did not maintain an impact on the subsequent follow-up checkpoints. No statistical difference was identified for compliance with fistulogram ≤40 days of access creation (pre-QI: 12% vs QI: 25%; $P = .093$) and for compliance with the 8-week postoperative appointment (pre-QI: 33% vs QI: 23%; $P = .457$). Both checkpoints demonstrated a very high noncompliance rate. Accordingly, time to maturation was 88 days for both the pre-QI and QI group, with a failure to mature rate of 22% for the pre-QI group and 21% for the QI group.

Conclusions: The QI initiative significantly increased the number of patients complying with the first 30-day follow-up appointment after access creation. However, patient compliance with a timely fistulogram and the second follow-up appointment was very poor and not influenced by the QI initiative, limiting the functional impact of the QI initiative on time to AVF maturation.

Outcomes of Percutaneous Suture-Mediated Vessel Closure in Venous Interventions

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Objectives: The safety and efficacy of vascular closure devices in the arterial system has been well documented. However, there are no reports describing the use of these devices in the venous system, despite the increasing frequency of percutaneous venous interventions, often involving large-bore sheaths in anticoagulated patients. This report describes our experience using the Perclose ProGlide (Abbott Vascular Devices, Pleasanton, Calif) suture-mediated device in venous closure.

Methods: A retrospective review of all patients undergoing off-label venous access closure with the Perclose was performed from 2008 to 2012. Seventy patients (50% male; mean age, 28 years) underwent 70 femoral venous access closures for sheaths ranging from 9F to 22F (mean, 18F). A single Perclose device was used postintervention for sheaths up to 12F, and two Perclose devices were used with the "Perclose" technique for sheaths >12F. Indications for intervention included nonthrombotic May-Thurner syndrome with leg swelling, May-Thurner syndrome with deep vein thrombosis, and pulmonary insufficiency requiring a percutaneous pulmonic valve. All patients underwent full anticoagulation intraprocedurally (activated clotting time >250 seconds) and at the time of vessel access closure. Mean follow-up was 13 months, and consisted of a physical examination (all patients) and venous duplex ultrasound imaging (20%). Main outcome measures were deep venous thrombosis (DVT) and access site hematoma.

Results: During longitudinal follow-up, there were no documented cases of DVT or access site hematoma. Venous duplex ultrasound imaging was performed between 1 and 56 months postprocedurally, with normal flow documented in all studied patients. Six patients (9%) had ipsilateral leg swelling necessitating imaging that demonstrated no evidence of DVT or venous stenosis. Two deaths occurred (one <30 days, one late) due to heart failure in pulmonary insufficiency patients, but neither was procedurally related.

Conclusions: The use of suture-mediated devices in the venous system appears to be well tolerated, with no documented cases of DVT in our series. The absence of any occurrences of hematoma in these patients, despite large-bore sheath access and full anticoagulation, suggests a clinical benefit for use of suture-mediated closure devices. Prospective studies with routine duplex imaging after Perclose use in the venous system will better elucidate the long-term safety of this technique.

United States National Survey of Vascular Surgery Consent

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Objectives: Currently, there are no explicit guidelines for informed consent for vascular surgical interventions. Unfortunately, there is evidence to suggest that consent deficiencies occur. The objective of this survey was to catalog current peer practice and collate consensus relating to vascular surgery patient consent.

Methods: A prospective anonymous online survey was administered using Survey Monkey™ to members of the Society for Clinical Vascular Surgery in June 2013. After completion of provider demographic details, each member evaluated general and procedural-specific complications for arterial and venous interventions that should be discussed with patients during the informed consent process. Greater than 75% reporting for a specific complication was deemed the threshold for consensus opinion.

Results: Of 1210 members, 179 (14.8%) completed the survey. The majority of respondents were staff surgeons (85.5%), followed by vascular fellows (11.2%). Both groups considered vascular fellows competent to obtain consent. The majority of patients were consented primarily by the staff surgeons (67.6%) ≤24 hours of surgery (43%). This was done in the outpatient (67.4%) or preoperative holding areas (66%). A procedure-specific, preprinted consent form was used in 95% of patients, with additional written documentation provided in 59.7%. General complications discussed before arterial surgery included bleeding (94.9%), cardiac (94.9%), cerebrovascular (92.6%), wound infection (90.4%), respiratory (78.7%), and thromboembolic (76%) events. Although respondents provided consent consensus for a number of core vascular procedures, in patients undergoing open aortic surgery, 10.2%, 14.4%, and 13.6% reported no discussion of bleeding, impotence, or lower limb ischemia, respectively. Endoleak (5.6%), follow-up surveillance (14.0%), graft occlusion/lower limb ischemia (8.4%), and reintervention possibilities (10.3%) were additionally not documented during EVAR consent by survey respondents. Surprisingly, cranial nerve injury and restenosis were not discussed by 6.5% and 18.7% of vascular surgeons performing carotid endarterectomy. For patients undergoing limb bypass procedures, graft occlusion, limb loss, edema, and procedural failure were not discussed in 5% to 9.9% of cases. General complications described during venous procedures included bruising (90%), bleeding (86%), thromboembolic events (87%), and wound infections (81.8%). However, nerve injury, failure to improve symptoms, scarring, and recurrence were omitted from discussion by 17.7%, 11.5%, 22.2%, and 12.5%, of respondents. Only 37% and 5.8% of vascular centers provided informal and formal consent training, respectively.

Conclusions: The informed consent process presently used by most providers is nonstandardized and inadequate. Recognized complications for procedures are frequently not discussed during the informed consent